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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/660,096	09/10/2003	Yoshiro Udagawa	B588-655 (25815.671)	5924

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EXAMINER

LAM, HUNG H

ART UNIT	PAPER NUMBER
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2622

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01/07/2010

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/660,096	Applicant(s) UDAGAWA, YOSHIRO	
	Examiner HUNG H. LAM	Art Unit 2622	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 09/10/09.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-19 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-19 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 10 September 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Amendment

1. The amendments, filed on 09/10/09, have been entered and made of record. Claims 1-19 are pending.

Response to Arguments

3. Applicant's arguments with respect to claims 1-19 have been considered but are moot in view of the new ground(s) of rejection. Therefore, the Non Final Office Action mailed on 06/10/09 has been withdrawn and replaced by this Office Action.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 1, 3-6, 8, 10-12, 14-16, 18-19 are rejected under 35 U.S.C. 102(e) as being anticipated by Tsuda (US-2005/0,225,662).

With regarding **claim 1**, Tsuda discloses an image sensing apparatus having at least a filter insertion/removal device which is operated by a user and inserts and removes an optical filter for reducing a light quantity to an image sensing element serving as an optical system ([0004-0006]), comprising:

a signal processing device (Fig. 21; IRIS Control Signal Computing Circuit 508) which performs signal processing so as to generate image data from an image sensing signal output from the image sensing element (Fig. 21; CCD 504; [0008-0009]);

a brightness value calculation device which calculates a first brightness value representing a brightness of part or all of an object which is imaged on the image sensing element (Fig. 21; luminance signal detecting circuit 507 and IRIS control signal computing circuit 508; [0008]: a first brightness value is interpreted as the first output luminance signal outputting from luminance signal detecting circuit 507);

a brightness value correction device which calculates a second brightness value by correcting the first brightness value on the basis of a light reduction amount generated by inserting the optical filter by the filter insertion/removal device (The camera system shown in Fig. 21 is a control feed back type system. Therefore, it is inherent that when an ND filter switching level is on , the luminance signal detecting circuit 507 inherently corrects the first luminance and thereby outputting a second reduced luminance signal); and

a control device which controls the signal processing in said signal processing device by using the second brightness value (Fig. 21; see Iris Control Signal Computing Circuit and Driver 509; [0011-0013]).

With regarding **claim 3**, Tsuda discloses an image sensing apparatus having at least a filter insertion/removal device which is operated by a user and inserts and removes an optical filter for reducing a light quantity to an image sensing element serving as an optical system ([0004-0006]), comprising:

a signal processing device (Fig. 21; IRIS Control Signal Computing Circuit 508) which performs signal processing so as to generate image data from an image sensing signal output from the image sensing element (Fig. 21; CCD 504; [0008-0009]);

a brightness value calculation device which calculates a first brightness value representing a brightness of part or all of an object which is imaged on the image sensing element (Fig. 21; luminance signal detecting circuit 507 and IRIS control signal computing circuit 508; [0008]: a first brightness value is interpreted as the first output luminance signal outputting from luminance signal detecting circuit 507);

a brightness value correction device which calculates a second brightness value by correcting the first brightness value on the basis of a light reduction amount generated by inserting the optical filter by the filter insertion/removal device (The camera system shown in Fig. 21 is a control feed back type system. Therefore, it is inherent that when an ND filter switching level is on , the luminance signal detecting

circuit 507 inherently corrects the first luminance and thereby outputting a second reduced luminance signal); and

a control device which controls the signal processing in said signal processing device by using the second brightness value (Fig. 21; see Iris Control Signal Computing Circuit and Driver 509; [0011-0013]: after the second reduced luminance signal is output, the Iris Control Signal Computing Circuit 508 inherently drive the Iris 503 because of a control feedback type system characteristic).

With regarding **claim 4**, Tsuda discloses the apparatus according to claim 3, wherein said control of the optical system includes control of an exposure value to the image sensing element ([0011]).

With regarding **claim 5**, Tsuda discloses the apparatus according to claim 4, wherein the optical system further comprises an aperture device (Fig. 21; Iris 503) which changes an aperture diameter, and control of the exposure value includes control of the aperture diameter of the aperture device ([0009; 0011]).

With regarding **claim 6**, Tsuda discloses the apparatus according to claim 1, wherein the optical filter includes an ND filter (Fig. 21; ND filter 502).

With regarding **claim 8**, Tsuda discloses an image sensing method using an image sensing apparatus having at least a filter insertion/removal device which is

operated by a user and inserts and removes an optical filter for reducing a light quantity to an image sensing element serving as an optical system ([0004-0006]), comprising:

a first step of calculating a first brightness value representing a brightness of part or all of an object which is imaged on the image sensing element (Fig. 21; luminance signal detecting circuit 507 and IRIS control signal computing circuit 508; [0008]: a first brightness value is interpreted as the first output luminance signal outputting from luminance signal detecting circuit 507);

a second step of correcting the first brightness value calculated in the first step on the basis of a light reduction amount generated by inserting the optical filter by the filter insertion/removal device operated by the user (The camera system shown in Fig. 21 is a control feed back type system. Therefore, it is inherent that when an ND filter switching level is on , the luminance signal detecting circuit 507 inherently corrects the first luminance and thereby outputting a second reduced luminance signal).

a third step of controlling, by using the second brightness value calculated in the second step, signal processing of generating image data from an image sensing signal output from the image sensing element (Fig. 21; see Iris Control Signal Computing Circuit and Driver 509; [0011-0013]: after the second reduced luminance signal is output, the Iris Control Signal Computing Circuit 508 inherently drive the Iris 503 because of a control feedback type system characteristic).

With regarding **claim 10**, the claim is a method claim of an apparatus claim 3. Therefore, claim 10 is analyzed and rejected as discussed in claim 3.

With regarding **claim 11**, the claim is a method claim of an apparatus claim 4. Therefore, claim 11 is analyzed and rejected as discussed in claim 4.

With regarding **claim 12**, the claim contains the same limitations as claimed in 8. Therefore, claim 12 is analyzed and rejected as discussed in claim 8. However, claim 12 further requires a computer readable recording medium which records a program for controlling an image sensing apparatus ([008-0010]: a computer readable recording medium and the program for controlling the image sensing apparatus are inherently included in order to perform the flow chart in Fig. 22 and the hardware parts in Fig. 21).

With regarding **claim 14**, the claim contains the same limitations as claimed in claim 3. Therefore, claim 14 is analyzed and rejected as discussed in claim 3. However, claim 14 further requires a computer readable recording medium which records a program for controlling an image sensing apparatus ([008-0010]: a computer readable recording medium and the program for controlling the image sensing apparatus are inherently included in order to perform the flow chart in Fig. 22 and the hardware parts in Fig. 21).

With regarding **claim 15**, the claim contains the same limitations as claimed in claim 4. Therefore, claim 15 is analyzed and rejected as discussed in claim 4.

With regarding **claim 16**, the claim contains the same limitations as claimed in 8. Therefore, claim 16 is analyzed and rejected as discussed in claim 8. However, claim 16 further requires a computer readable recording medium which records a program for controlling an image sensing apparatus ([008-0010]: a computer readable recording medium and the program for controlling the image sensing apparatus are inherently included in order to perform the flow chart in Fig. 22 and the hardware parts in Fig. 21).

With regarding **claim 18**, the claim contains the same limitations as claimed in claim 3. Therefore, claim 18 is analyzed and rejected as discussed in claim 10. However, claim 16 further requires a computer readable recording medium which records a program for controlling an image sensing apparatus ([008-0010]: a computer readable recording medium and the program for controlling the image sensing apparatus are inherently included in order to perform the flow chart in Fig. 22 and the hardware parts in Fig. 21).

With regarding **claim 19**, the claim contains the same limitations as claimed in claim 4. Therefore, claim 19 is analyzed and rejected as discussed in claim 11.

4. Claims 2 ,9, 13 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tsuda.

With regarding **claim 2**, the embodiment of Fig. 21 in Tsuda reference fails to disclose the apparatus according to claim 1, wherein said control of the signal processing includes control of white balance processing.

In the embodiment of Fig. 23, Tsuda teaches an interchangeable SLR camera system having a presetting white balance control outdoor mode (5600 K) and indoor mode (3200K; [0015]). According to Tsuda, camera user may select the WB via WB mode selection switch 115 so that the camera's microcomputer 109 reads the switching state of the WB mode and outputs gain control signals to Gain Control Signal Output Circuit 125 ([0019 and 0026]). In light of the teaching from embodiment of Fig. 23, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the embodiment of Fig. 21 to include a white balance control function/step. The modification thus provides a more versatile camera system.

With regarding **claim 9**, the embodiment of Fig. 21 in Tsuda reference fails to disclose the method according to claim 8, wherein control of the signal processing in the third step includes control of white balance processing.

In the embodiment of Fig. 23, Tsuda teaches an interchangeable SLR camera system having a presetting white balance control outdoor mode (5600 K) and indoor mode (3200K; [0015]). According to Tsuda, camera user may select the WB via WB mode selection switch 115 so that the camera's microcomputer 109 reads the switching state of the WB mode and outputs gain control signals to Gain Control Signal Output Circuit 125 ([0019 and 0026]). In light of the teaching from embodiment of Fig. 23, it

would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the embodiment of Fig. 21 to include a white balance control function/step. The modification thus provides a more versatile camera system.

With regarding **claim 13**, the claim contains the same limitations as claimed in 9. Therefore, claim 13 is analyzed and rejected as discussed in claim 9.

With regarding **claim 17**, the claim contains the same limitations as claimed in 9. Therefore, claim 17 is analyzed and rejected as discussed in claim 9.

5. Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Tsuda in view of Takahashi (US-2002/0,118,897).

With regarding **claim 7**, Tsuda discloses the apparatus according to claim 1, wherein said brightness value calculation device calculates the first brightness value on the basis of an aperture value determined in accordance with an aperture diameter of an aperture device ([0009-0011]: Luminance 506 output level inherently causes by an amount an IRIS opened/closed. Further more, the camera system of Fig. 21 is a feedback control system. Therefore, luminance signal detecting circuit 507 and IRIS control signal computing circuit 508 inherently obtains a first luminance signal on the basis of an amount of opened/closed direction of IRIS 503).

However, Tsuda fails to explicitly disclose wherein said brightness value calculation device calculates a time value determined in accordance with a time during which an object image is formed on the image sensing element, and a sensitivity of the image sensing element.

In the same field of endeavor, Takahashi discloses an exposure control apparatus having a first and second exposure control mode. In first exposure control mode, an exposure value for photographing is determined while exposure control is performed in accordance with the brightness of object images repetitively sensed by an image sensing unit, and in a second exposure control mode, an exposure value for photographing is determined by performing exposure control by using a plurality of preset exposure values ([0009]). Takahashi further discloses an exposure determining means determining an Aperture value A_v , shutter speed value T_v , CCD sensitivity value S_v for use in an image sensing on the basis of a receive exposure control values B_vf or $B_v s = B_{v1} + \Delta B_{v1}$: wherein $\Delta B_{v1} = \log_2 (Y_1/Y_{ref})$. Wherein Y_1 is designated as average luminance value of digital data and Y_{ref} denote the target luminance value ([0031-0038]). According to Takahashi, whether an abrupt scene change occurs in an image sensing method or apparatus of the above sort, a feedback type exposure determining means or a scan type exposure determining means properly controls exposure. Consequently, a correct exposure value can be obtained at all times ([0047]). In light of the teaching from Takahashi, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the device of Tsuda to further determine the Shutter speed (time) and

sensitivity of the image sensor base on obtained brightness or luminance of a captured image signal. The modification thus provides a camera system that can obtain correct exposure value at all time (Takahashi: [0047]).

Conclusion

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

a) Yamagishi (US-2005/0,041,117) discloses a camera system that determines shutter opening time on the basis of the subject luminance measured by a light measuring circuit.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to HUNG H. LAM whose telephone number is (571)272-7367. The examiner can normally be reached on Monday - Friday 8AM - 5PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, SINH TRAN can be reached on 571-272-7564. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2622

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Hung H Lam/
Examiner, Art Unit 2622

01/04/09